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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/017,687	10/30/2001	John B. Taylor	396421	5708
7590	10/07/2003		EXAMINER	
Kenneth D. Goetz Lathrop & Gage LC Suite 2800 2345 Grand Boulevard Kansas City, MO 64108			CHOI, FRANK I	
			ART UNIT	PAPER NUMBER
			1616	
DATE MAILED: 10/07/2003				12

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Applicant No.	Applicant(s)
	10/017,687	TAYLOR, JOHN B.
Examiner	Art Unit	
Frank I Choi	1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 18 June 2003.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-6,9,11-23,26 and 28-54 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-6,9,11-23,26 and 28-54 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 8 .
- 4) Interview Summary (PTO-413) Paper No(s) _____ .
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____

DETAILED ACTION

Priority

Please update status of the related applications, set forth application serial nos. for the patent nos. listed, and make clear that the present application, and not application serial no. 09/991,968 is a CIP of 09/419,127.

Information Disclosure Statement

The information disclosure statements filed on 10/30/01 and 9/10/2002 fail to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because a number of the references do not have publication dates. Applicant has provided some publications dates via the information disclosure statement (7/3/2003), however, there remains a number of references which do not have publication dates in the previous information disclosure statements. The other references having publication dates were considered, however, the references lacking publication dates have not been considered as to the merits. **Examiner notes that Applicant has still not provided the page numbers of the Merck Index reference as requested.**

Specification

The amendment filed 6/18/2003 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: “Merck Index (11th ed. 1989)” was not originally set forth in the Specification. Further, reference to the same is unnecessary as reference to rows 4 or 5 of the periodic table of elements in the original disclosure provides sufficient basis for adding the elements themselves.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claims 1,2, 11, 12, 14, 18,19,20,28, 35, 36, 38,40, 41, 43, 45, 46, 48, 50 are objected to because of the following informalities:

Claims 1, 18, the formulas are missing where appropriate, lines or brackets for the salts and double bonds for the oxygen.

Claims 1,11,18,28, the phosphate salts should have “O”s not “0”s to represent oxygen.

Claims 1,18,35, 40,45,50, “fungicidal” should be “fungal”.

Claims 11, 12,14, there is no antecedent basis for “salt” since “salt” was deleted from claim 1.

Claims 35,40,45,50, “bactericidal” should be “bacterial”.

Claims 2, 19,20,38,43,48, “AI” should be replaced with “metal”. The Specification defines “AI” to be the active ingredient, i.e. the metal. There is no reason why one should have to comb through the Specification to find out what “AI” means.

Claims 35,40,45,50, “a.”, “b.”, and “c.” should be “(a)”, “(b)” and “(c)”.

Claims 36,41,46, the claims should end with a period mark.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-6, 9, 11-17, 32, 33 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for controlling, does not reasonably provide enablement

for preventing. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims.

The nature of the invention:

The invention is directed to an aqueous solution for preventing and controlling fungicidal and bacterial diseases in plant with the combination of phosphates and chelates.

The state of the prior art and the predictability or lack thereof in the art:

The prior art of record does not appear to show that the same prevents said diseases. As such, it appears that predictability in the art is low.

The amount of direction or guidance present and the presence or absence of working examples:

The Specification does not appear to give direction as to how the aqueous solution would be used to prevent said diseases and there are no working examples which show that said solution is effective in preventing said diseases.

The breadth of the claims and the quantity of experimentation needed:

The breadth of the claim is broad as prevention means that the plant will never again have the fungal or bacterial disease. Further, one of ordinary skill in the art would be required to do undue experimentation in order to use the invention commensurate in scope with the claims, i.e. in determining how to apply the solution to prevent said diseases and determining which diseases are susceptible to prevention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 6, 18, 23, 28-31, 35-38,40, 41-43, 45-48,50-53 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 6, 23 are indefinite as it is uncertain whether the concentration of metal chelate is with respect to the claimed aqueous solution or in the aqueous solution of metal chelate which is added to aqueous solution. Examiner notes is some ambiguity as to whether the Specification discloses and enables 1%-5% concentration in the added aqueous solution or in the combined aqueous solution. Examiner respectfully requests that Applicant indicate one or the other and the basis for said indication.

Claim 18 is indefinite as the claim recites “phosphate salt”, however, the compounds which may be chosen include compounds which are not phosphate salts but phosphate acids acids. Examiner suggests using “phosphate”.

Claims 28, 29, 30, 31 are indefinite as it is uncertain what “first salt” and “second salt” refer to as Claim 18, on which they are dependent, does not mention the same.

Claims 35, 38,40,43, 45,48,50,53 are indefinite as it is uncertain what “aqueous solution” is being referred to in the dependent claims. Examiner notes that unlike the other claims, claim 45 recites “aqueous solution composition” instead of just “aqueous solution”.

Claims 36,37,41,42,46,47,51,52 are indefinite as “potassium phosphate” can mean “monopotassium phosphate” whereas the Specification indicates that the combination of KOH and monopotassium phosphate results in a equilibrium reaction to form dipotassium phosphate.

Claims 35,40,45, 50 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the

elements. See MPEP § 2172.01. The omitted elements are: The equilibrium reaction of H3PO3 and KOH to form potassium phosphonate in claims 35,40,45,50. The equilibrium reaction of monopotassium phosphate and KOH to form dipotassium phosphate in claims 35,40. The Specification indicates that the combination of the compounds above results in an equilibrium reaction, as such, the same should be set forth in the claims and the dependent claims amended to conform with any such amendments (Specification , Pg. 25)..

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-6,9,11-23,26,28-54 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-8 of U.S. Patent No. 5,736,164, Claims 1-5 of U.S. Patent No. 5,800,837 or Claims 1-49 of U.S. Patent No. 6,338,860, each in view of Ducret et al. (U.S. Pat. 4,139,616), Fenn et al. (1984), Reuveni et al. (Plant Pathology 1995), Scher (U.S. Pat. 4, 714,614) and Supa Crop.

U.S. 5,736,164 claims a method of controlling fungal disease in plants comprising applying potassium phosphates and potassium phosphonates (Claims 1-8).

Ducret et al. (U.S. Pat. 4,139,616) teach that phosphonate salts are effective fungicides (Column 1).

Fenn et al. (1984) teaches that phosphonate and phosphorous acid are effective against Phytophthora (See entire document).

Reuveni et al. (Plant Pathology 1995) teaches the potassium phosphates, optionally with KOH, are effective fungicides and fertilizers (See entire document).

Scher teaches FeEDDHA is effective against Fusarium wilt (Column 9, lines 40-61).

Supa Crop (1990) teaches that a composition containing phosphates, phosphate and chelated metals of iron, manganese, zinc, copper is provides protection against Phytophthora and Downy Mildew.

The difference between the claims of the U.S. Pat. Nos. 5,736,164, 5,800,837 and 6,338,860 and the claimed invention is that the said patent does not claim the combination of heavy metal chelate and phosphonate and phosphate. However, the prior art amply suggests the same as it is known in the art to combine phosphonates and phosphates, and to combine the same with metal chelates.. As such it would have been well within the skill of and one of ordinary skill in the art would have been motivated to modify the claims said patent with the expectation that the combination would exhibit increased effectiveness.

Examiner has duly considered Applicant's arguments but deems them unpersuasive.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 231 USPQ 375 (Fed. Cir. 1986). Further, the test for obviousness is not whether the features of a

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secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 208 USPQ 871 (CCPA 1981).

“It is *prima facie* obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose.... [T]he idea of combining them flows logically from their having been individually taught in the prior art.” *In re Kerkhoven*, 205 USPQ 1069, 1072 (CCPA 1980) (citations omitted) (Claims to a process of preparing a spray-dried detergent by mixing together two conventional spray-dried detergents were held to be *prima facie* obvious.). See also *In re Crockett*, 126 USPQ 186 (CCPA 1960) (Claims directed to a method and material for treating cast iron using a mixture comprising calcium carbide and magnesium oxide were held unpatentable over prior art disclosures that the aforementioned components individually promote the formation of a nodular structure in cast iron.); and *Ex parte Quadranti*, 25 USPQ2d 1071 (Bd. Pat. App. & Inter. 1992) (mixture of two known herbicides held *prima facie* obvious).

The prior art teaches the combination of phosphorus compounds and metal chelates and further teaches that each alone are effective in treating fungal infections in plants. As such, in light of the above, one of ordinary skill in the art would have been motivated to modify the prior art as above with the expectation that the same would be effective in treating fungal infections in plants. Applicant argues that it has show synergistic data, however, the data is limited to specific doses, specific formulations and specific plant disease. In an IPER (12/13/2002), it was

remarked by the PCT examiner that the embodiments of the claimed invention showed no synergistic activity but only what would be expected from the combination of the components.

Therefore, the claimed invention, as a whole, would have been an obvious modification of the claims of said patent to one of ordinary skill in the art at the time the invention was made, because every element of the invention has been collectively taught by the combined teachings of the references.

Claims 1-6,9,11-23,26,28-54 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1,2 of U.S. Patent No. 6,139,879 in view of Ducret et al. (U.S. Pat. 4,139,616), Fenn et al. (1984), Reuveni et al. (Plant Pathology 1995), Scher (U.S. Pat. 4, 714,614) and Supa Crop (1990).

U.S. 6,139,879 claims a method of controlling fungal disease in plants comprising applying heavy metal chelates (Claims 1,2).

Ducret et al. (U.S. Pat. 4,139,616) teach that phosphonate salts are effective fungicides (Column 1).

Fenn et al. (1984) teaches that phosphonate and phosphorous acid are effective against Phytophthora (See entire document).

Reuveni et al. (Plant Pathology 1995) teaches the potassium phosphates, optionally with KOH, are effective fungicides and fertilizers (See entire document).

Scher teaches FeEDDHA is effective against Fusarium wilt (Column 9, lines 40-61).

Supa Crop (1990) teaches that a composition containing phosphates, phosphate and chelated metals of iron, manganese, zinc, copper provides protection against Phytophthora and Downy Mildew.

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The difference between the claims of U.S. Pat. 5,736,164 and the claimed invention is that the said patent does not claim the combination of heavy metal chelate and phosphonate and phosphate. However, the prior art amply suggests the same as it is known in the art to combine phosphates, phosphates and metal chelates. As such it would have been well within the skill of and one of ordinary skill in the art would have been motivated to modify the claims said patent with the expectation that the combination would exhibit increased effectiveness.

Examiner has duly considered Applicant's arguments but deems them unpersuasive for the same reasons as above.

Therefore, the claimed invention, as a whole, would have been an obvious modification of the claims of said patent to one of ordinary skill in the art at the time the invention was made, because every element of the invention has been collectively taught by the combined teachings of the references.

Claim Rejections - 35 USC § 103

Examiner notes that the rejections herein are not intended to and do not apply to subject matter which was found to be allowable over the prior art in Patent Nos. 6,139,879, 6,338,860, 5,997,910, 5,800,837 and 5,736,164.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6,9,11-23,26,28-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horriere et al. in view of in view of Ducret et al. (U.S. Pat. 4,139,616), Fenn et al. (1984), Reuveni et al. (Plant Pathology 1995), Scher (U.S. Pat. 4, 714,614) and Supa Crop (1990).

Horriere et al. teaches that phosphonates in combination with other fungicides, such as maneb and mancozeb show increased effectiveness (Column 2).

Ducret et al. (U.S. Pat. 4,139,616), Fenn et al. (1984), Reuveni et al. (Plant Pathology 1995), Scher (U.S. Pat. 4, 714,614) and Supa Crop (1990) are cited herein for the same reasons as above and the are incorporated herein to avoid repetition.

The difference between the prior art and claimed invention is that the said prior art does not expressly disclose the combination of an EDDHA metal chelate, phosphonate/phosphite and phosphate. However, the prior art amply suggests the same as it is known in the art to combine phosphates, phosphates and metal chelates. As such it would have been well within the skill of and one of ordinary skill in the art would have been motivated to modify the claims said patent with the expectation that the combination would exhibit increased effectiveness.

Examiner has duly considered Applicant's arguments but deems them unpersuasive for the same reasons as above.

Therefore, the claimed invention, as a whole, would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, because every element of the invention has been collectively taught by the combined teachings of the references.

Conclusion

A facsimile center has been established in Technology Center 1600. The hours of operation are Monday through Friday, 8:45 AM to 4:45 PM. The telecopier number for accessing the facsimile machine is (703) 872-9306.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank Choi whose telephone number is (703) 308-0067. Examiner maintains a flexible schedule. However, Examiner may generally be reached Monday-Friday, 8:00 am – 5:30 pm (EST), except the first Friday of the each biweek which is Examiner's normally scheduled day off.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's Supervisor, Mr. Thurman Page, can be reached on (703) 308-2927. Additionally, Technology Center 1600's Receptionist and Customer Service can be reached at (703) 308-1235 and (703) 308-0198, respectively.

FIC

October 6, 2003



JOHN PAK
PRIMARY EXAMINER
GROUP 1200